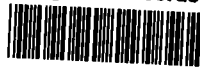


# The English Company

EPA Region 5 Records Ctr.



226487



## Limited Sub-Surface Investigation

*For the project address:*

319 E. Illinois Street  
Chicago, Illinois

*Prepared for:*

Pullman Bank  
1000 E. 111th Street  
Chicago, Il. 60628

July 25, 2002  
(project #500-377)

**LIMITED SUBSURFACE INVESTIGATION**

*Property Address:*

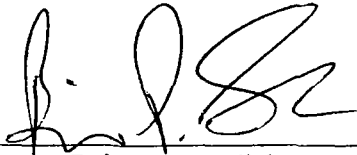
319 E. Illinois Street  
Chicago, Illinois

*Prepared for:*

Pullman Bank & Trust  
100 E. 111th Street  
Chicago, Illinois 60628

*Prepared by:*

The English Company  
1951 Hampton Drive  
Wheaton, Illinois 60187

A handwritten signature in black ink, appearing to read 'B. P. English', is written over a horizontal line.

Brian P. English  
Partner

Project Number  
500-335

July 25, 2002

*The English Company*

---

1951 Hampton Drive  
Wheaton, Illinois 60187

Phone: 630-260-8099  
Fax: 630-260-8568

July 25, 2002

Mr. Dave Larson  
Pullman Bank & Trust  
100 E. 111th Street  
Chicago, Illinois 60628

**Re: LIMITED SUBSURFACE INVESTIGATION  
319 E. ILLINOIS STREET, CHICAGO, ILLINOIS**

Mr. Larson:

The English Company is pleased to present the following report documenting the methods and results of the Limited Subsurface Investigation performed at the above referenced property. The report includes field screening observations and laboratory results of samples collected during the course of the on site investigation.

Thank you for this opportunity to be of service to you. Should you have any questions please call us at (630) 260-8099.

Very truly yours,

THE ENGLISH COMPANY  


Brian P. English  
Partner

enclosures

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## FIGURE

*Figure 1 - Boring Location Map*

## APPENDICES

*Appendix A - Geologic Boring Logs*

*Appendix B - Chain of Custody Record/Laboratory Analytical Data*

*Appendix C - Comparison Table*

## **1.0 GENERAL**

This report presents the methodology, findings and conclusions of the Limited Subsurface Investigation conducted at 319 E. Illinois Street, Chicago, Illinois (the Property).

### **1.1 Authorization**

The English Company (TEC) was authorized by Mr. Dave Larson of Pullman Bank & Trust to perform a limited subsurface investigation in response to the conclusions and recommendations made in the Phase I Environmental Assessment performed by STS Consultants, Ltd. dated April 12, 1994.

### **1.2 Purpose**

The purpose of the Limited Subsurface Investigation was to determine if predominant contaminants of concern associated with hazardous substances and/or petroleum are present in historical material (Chicago Fire debris) used to fill the property. These contaminants were thought to possibly be present in the fill material on the site either from sites where the fill material originated from, or from the LUST and railroad properties adjacent to the Property.

## **2.0 SAMPLING PROCEDURE**

TEC subcontracted with EPS Environmental services to perform drilling, engineering and laboratory services on this project. Under the direction of Mr. Samuel Bodine, Senior Project Manager, a total of four soil borings (GP-1 through GP-4) were conducted at select locations on the Property. The soil boring locations are depicted in Figure 1 - Boring Location Map, following the text of this report.

### **2.1 Field Activities**

Soil borings were conducted following ASTM-recommended practices for continuous thin wall probe sampling. A truck-mounted, hydraulically-powered percussion/probing device (Geoprobe®) was used to advance a two-inch diameter steel drive point to the top of the desired sampling interval. Soil samples were collected in 48-inch intervals by advancing two-inch diameter steel thin-wall probe samplers. The samplers were attached to the leading end of the extension probe rods, and driven downward until the desired target depths were reached. After the desired sampling interval was obtained, the assembly was extracted, opened and the samples were collected.

The borings were advanced 16 feet below ground surface (bgs). Four soil samples were collected from each soil boring (see Geologic Boring Logs, Appendix A). Triplicate soil samples were collected from each sampling interval. One of the triplicate samples was placed into an airtight plastic bag for field screening, the second sample was placed into a glass jar and sealed with a Teflon-lined plastic lid, allowing no head space, and the third sample was placed into pre-weighed 40 milliliter vials and preserved with methanol or sodium bisulfate, for possible laboratory analysis.

All soil samples were examined for visual signs of contamination and for the presence of unusual odors. Soil samples in airtight plastic bags were allowed to equilibrate to 70° Fahrenheit for approximately 10 minutes. Headspace in each sample bag was then screened with a flame-ionization detector (FID) and the screening results recorded on Geological Boring Logs (Appendix A). The FID records total concentrations of organic vapors; however, the instrument does not differentiate between types of organic compounds.

All downhole sampling equipment was cleaned with water and non-alkaline soap between each sampling event. This procedure was used to minimize the possibility of cross contamination. After sampling was complete, all boreholes were properly abandoned with hydrated bentonite pellets and concrete or asphalt patch.

## **2.2 Field Observations**

FID screening results ranged from zero to 100 parts per million (PPM). Black stained fill material and petroleum hydrocarbon odors were noted in boring GP-2 at 12 feet bgs. No other visual or olfactory signs of petroleum hydrocarbon contamination were noted in the soil samples obtained from the remaining borings. FID screening results are included on the Geological Boring Logs (Appendix A).

## **3.0 PHYSICAL SETTING**

### **3.1 Topography**

According to the Chicago Loop Quadrangle map, the general topography of the Property displays an approximate ten-foot decrease in elevation within 2,400 feet east of the Property in the direction of Lake Michigan.

### **3.2 Soils**

According to the ISGS Circular #460, Surficial Geology of the Chicago Region, the Property is located on area classified as "Made" Land. This classification refers to man-made fill; and comprises areas formerly covered by Lake Michigan and Lake Calumet; largely sand in areas bordering Lake Michigan and rubbish in areas bordering Lake Calumet.

Based on ISGS Circular #532, Potential for Contamination of Shallow Aquifers from Land Burial of Municipal Waste, the Property is located within the rating area of M. The rating denotes the capacities of earth material to accept, transmit, restrict or remove contaminants from waste effluent. In general, an M rating area contains man-made lands.

### **3.3 Geologic Profile**

Based on soil borings conducted, the general geologic profile of the subject property consists of eight to 12 feet of miscellaneous fill material consisting of broken brick, broken concrete, sand, clay and gravel underlain by wet sand to the maximum boring depth of 16 feet below grade. The geologic profile of the soils encountered appeared to be consistent with those published by the ISGS.

## **4.0 LABORATORY ANALYSIS**

### **4.1 Analytical Program**

Based on field screening results and observations, one representative soil samples from each boring (GP-1/4', GP-2/12', GP-3/8', and GP-4/6') was submitted for laboratory analysis. Soil samples were obtained as previously described, chilled and transported under chain of custody to Environmental Monitoring and Technologies, Inc. of Morton Grove, Illinois. The soil samples were analyzed for polynuclear aromatic hydrocarbons (PNAs), volatile organic compounds (VOCs), pH and total Resource Conservation and Recovery Act (RCRA) metals, predominant contaminants of concern associated with hazardous substances and petroleum. In addition, toxicity characteristic leaching procedure (TCLP) analysis was conducted on soil sample GP-2/12' to determine whether the fill material would be considered hazardous under RCRA. All analyses were performed in accordance with SW-846, *Test Methods for Evaluating Solid Waste*, using appropriate USEPA methodology. See appendix B for Chain of Custody Record.

### **4.2 Evaluation of Laboratory Results**

To assess potential detrimental environmental impacts, the Illinois Environmental Protection Agency (IEPA) Tiered Approach to Corrective Action Objectives (TACO) Tier 1 soil remediation objective (SRO) values were used as a guideline for qualifying the concerns associated with soil contamination. SROs are numerical concentrations of goals for contaminated soil. The Tier 1 SROs are further separated into two objectives dependent on intended land use (either residential or commercial/industrial). The TACO SROs apply to sites where the IEPA has requested or forced remedial actions, or to sites where voluntary cleanups have been initiated under IEPA supervision.

To apply TACO Tier 1 SROs, three exposure routes must be addressed: ingestion, inhalation, and potential to contaminate groundwater. The ingestion exposure route applies to contaminant concentrations above TACO Tier 1 SROs within the first three feet below the land surface. The inhalation exposure route applies to contaminant concentrations above TACO Tier 1 SROs within the first ten feet below land surface. The potential to contaminate groundwater is further separated into two objectives dependent on Class I or Class II groundwater designation. The IEPA generally will take a more conservative approach by assuming Class I groundwater to be present, unless otherwise documented.

Subpart C of TACO allows for exclusion of exposure pathways (e.g., preventing potential human health exposure). According to TACO guidelines, to eliminate the inhalation and/or ingestion exposure routes, and engineering barrier (i.e., asphalt, concrete, or three feet of clean, compacted clay) may be used to cover affected areas of the Property. An engineering barrier, as defined by TACO, limits exposure (e.g., "cutting off" the route) and/or controls migration of contaminants. Moreover, the groundwater ingestion exposure route may be eliminated if favorable soil underlies the Property or by restricting the use of potable consumption of groundwater.

It should be noted, according to TACO (35 Administrative Code part 742.305), no exposure route shall be excluded from consideration relative to a contaminant of concern if hazardous levels of contaminants are present.

#### **4.3 Analytical Results**

Analyses conducted on representative soil samples identified varying concentrations of various VOCs above laboratory reporting limits; however, the concentrations were below Tier 1 SROs. As such, Property soil has not been significantly impacted by VOCs; no further discussion regarding VOC impacted soil is necessary.

Analyses conducted on representative soil samples identified varying concentrations of various PNA compounds above Tier 1 SROs for residential land use. See below for further discussion.

Analyses conducted on representative soil samples identified varying concentrations of various RCRA metals above laboratory detection limits. The concentrations of various metals detected are within those in background soils within Metropolitan areas, with the exception of lead. The concentrations of lead in soil sample GP-2/12' was above Tier 1 SROs; and is considered hazardous by characteristic. See below for further discussion.

The pH of soil samples were within levels of native surrounding soil.

#### **5.0 CONCLUSION**

The purpose of the Limited Subsurface Investigation was to determine if predominant contaminants of concern associated with hazardous substances and/or petroleum are present in historical material (Chicago Fire debris) used to fill the property. These contaminants were thought to possibly be present in the fill material on the site either from sites where the fill material originated from, or from the LUST and railroad properties adjacent to the Property. A total of four soil borings were advanced at select locations on the Property. Black stained fill material and petroleum hydrocarbon odors were noted in boring GP-2 at 12 feet below ground surface (bgs). No visual or olfactory signs of contaminated fill material or native soil were observed in the remaining borings. Based on field screening results and observations, one representative soil sample from each boring (GP-1/4', GP-2/12', GP-3/8', and GP-4/6') was submitted for polynuclear aromatic hydrocarbons (PNAs), volatile organic compounds (VOCs), pH and total Resource Conservation and Recovery Act (RCRA) metals, predominant contaminants of concern associated with hazardous substances and petroleum. In addition, toxicity characteristic leaching procedure (TCLP) analysis was conducted on soil sample GP-2/12' to determine whether the fill material would be considered hazardous under RCRA.

Analyses conducted on the representative soil samples identified varying concentrations of various PNA compounds and RCRA metals above the Illinois Environmental Protection Agency (IEPA) Tiered Approach to Corrective Action Objectives (TACO) Tier 1 soil remediation values for residential land use. Moreover, hazardous concentrations of lead were identified in Property soil.



## Discussion

As previously mentioned, Subpart C of TACO allows for exclusion of exposure pathways (e.g., preventing potential human exposure). However, according to 35 Illinois Administrative Code Part 742, soil exhibiting hazardous characteristics must be remedied prior to exclusion of exposure pathways. According to TACO guidelines, once the lead contaminated soil is remediated, to eliminated the ingestion exposure route, an engineering barrier (i.e., asphalt, concrete, or three feet of clean, compacted clay) may be used to cover affected areas of the Property. An engineering barrier, as defined by TACO, limits exposure (e.g., "cutting off" the route) and/or controls migration of contaminants. Moreover, the groundwater exposure route may be excluded by the existing memorandum of understanding between the IEPA and the City of Chicago that prohibits the use of groundwater within the City limits (an institutional control). It should be noted; TACO requires any soil with concentrations of contaminants above Tier 1 SROs requiring removal from the Property be disposed at a facility licensed to accept such waste.

The following discussions are for each exposure route with contaminants of concern in Property soil above Tier 1 SROs from residential land use/Class I groundwater.

### Ingestion Exposure Route

Analyses conducted on representative soil samples identified varying concentrations of various PNA compounds and lead above Tier 1 SROs for the ingestion pathway (potential for human exposure). The concentration of lead in sample GP-2/12' is considered hazardous by characteristic and above the ingestion and potential impact to groundwater exposure route. Once Property soil contaminated with hazardous concentrations of lead is remediated, an engineering barrier(s) would be required to prevent human ingestion to remaining PNA and lead contaminated soil.

It should be noted. PNAs are commonly associated with heavier petroleum distillates including asphalt, roofing tar, fuel oil, and coal tars. As the area where the Chicago Fire of 1871 occurred included the property, it is probable the Property was initially rebuilt over fill and debris generated by the Fire. Moreover, it has been documented that higher than normal concentrations of PNAs exist in downtown Chicago fill soils (Berggren et al, 1991).

### Groundwater Exposure Route

LEAD ALSO

Varying concentrations of various PNAs were identified above Tier 1 soil component of the groundwater ingestion route. In addition, the concentration of lead in sample GP-2/12' is considered hazardous by characteristic and above the soil component of the groundwater ingestion exposure route. According to 35 Illinois Administrative Code Part 742, Property soil with hazardous concentrations of lead must be remediated prior to eliminating the groundwater exposure route by the existing memorandum of understanding between the IEPA and the City of Chicago that prohibits the use of groundwater with the City limits (an institutional control). Additional testing would be necessary to delineate the extent of Property soil with hazardous concentrations of lead requiring remediation.

### **Additional Considerations**

It should be noted, under IEPA supervision, if an engineering barrier is used, it must be accompanied by institutional controls, legal mechanisms for imposing restrictions and conditions on land use, necessary when remaining contaminants pose a risk to human health and/or the environment. Moreover, TACO guidelines require Property owners/operators employing an engineering barrier to; 1) maintain a scaled map delineating the horizontal extent of soil above Tier 1 SROs; 2) provide written procedures for maintenance of the barrier(s); 3) develop a construction work plan for subgrade work (e.g., utility installation/repair), including a written worker protection plan (made available to outside contractors); and 4) file a Preventative Institutional Control (Environmental Notice) with the Cook County Recorder of Deeds identifying the type of contaminants present, and delineating the extent of impacted areas.

Should future construction activities or subgrade utility work involve excavation and off-site disposal of contaminated soil from the Property, any impacted soil above TACO Tier 1 levels should be properly disposed at a facility licensed to accept such waste, according to applicable federal, state and local laws and regulations.

### **Summary**

In summary, the major environmental concern with the Property is the presence of hazardous concentrations of lead in Property soil. According to TACO guidelines, Property soil with hazardous concentrations of lead must be remediated prior to eliminating the groundwater/ingestion exposure route. Further testing is necessary to delineate soil with hazardous concentrations of lead. Moreover, any soil with concentrations of contaminants above Tier 1 SROs requiring removal from the property must be disposed at a facility licensed to accept such waste.

## **6.0 WARRANTY AND LIMITATIONS OF LIABILITY**

TEC's Limited Subsurface Investigation was of limited scope. The Limited Subsurface Investigation was structured to screen for the presence of petroleum soil contamination in the area in which the borings were conducted, and was not intended to be an all inclusive search for soil contamination across the subject property. However, the limited subsurface investigation can provide an indication of the presence or absence of those contaminants sampled and analyzed for at the sample locations, at the time the samples were obtained in the sampled media.

TEC warrants that the findings and conclusions contained in this report have been promulgated in accordance with generally accepted environmental engineering methods. These environmental methods have been developed to provide the Client with information regarding apparent indications of existing or potential environmental conditions relating to the soils and are limited to the conditions observed at the time that the limited subsurface investigation was conducted. This report is also limited to the information available at the time it was prepared. There is a distinct possibility that conditions may exist at the subject

property which were not apparent during the limited subsurface investigation. TEC makes no other warranties, expressed or implied.

#### **6.1 Confidentiality**

TEC shall hold all field observations, borings, logs, analysis, laboratory reports and other reports in strict confidence and shall not disclose these items except to the Client, or except as ordered by any state or federal agency or court of law. In the event that TEC is ordered by a state or federal agency or court of law to make any such disclosures, the Client shall hold TEC harmless from liability for any and all damages that the Client may suffer due to TECs disclosure. In addition, the client shall indemnify TEC from any and all damages TEC may suffer due to any action which results in an order that TEC make a disclosure.

#### **6.2 Reliance on Limited Subsurface Investigation Report**

The limited subsurface investigation and report has been conducted exclusively for the Client and it is intended that only those parties will rely on the report. The limited subsurface investigation and report will be solely for the benefit of the Client and may not be relied upon by other parties.

**FIGURE 1**

Boring Location Map

East Illinois Street

Approximate Property Border

GP-1

GP-2

asphalt-paved parking lot

GP-4

attendant booth

GP-3

North New Street

East North Water Street



North

# FIGURE 1 - BORING LOCATION MAP

319 East Illinois Street  
Chicago, Illinois

EPS Environmental Services, Inc.  
7237 West Devon Avenue, Chicago, Illinois 60631

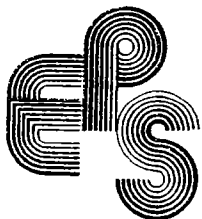
not to scale

+ = approximate soil boring location

Date: 07/01/02

Project # 4290-0602

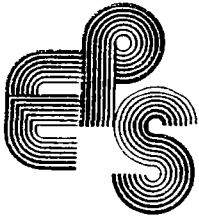
**APPENDIX A**  
**Geologic Boring Logs**



**EPS ENVIRONMENTAL SERVICES, INC.  
GEOLOGIC BORING LOG**

Project Address: 319 East Illinois Street, Chicago, Illinois  
 Project # 4290-0602, Engineer/Geologist: Samuel T. Bodine  
 Weather Condition: Dry X Wet      Snow      Temp 90  
 Boring # GP-1 Date: 07/01/02 Time: 1309 Location: See Boring Location Map

DESCRIPTION OF SOILS	DEPTH	SAMPLE	FID-PPM	ODOR
Asphalt FILL (brick, sand, clay gravel)	-			
	-2			
	-			
	-4	GP-1/4'	9	None
	-			
	-6			
	-			
Fine brown SAND, moist	-8		0	None
	-			
	-10			
	-			
	-12		9	None
	-			
	-14			
	-			
	-16		0	None
	-			
Total Depth: 16 feet below ground surface (bgs)	-			
Rig: Geoprobe	-			
Sampler Type: 1.75" Clear plastic sleeves	-18			

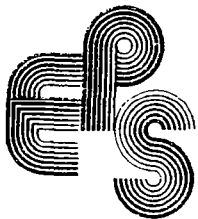


EPS ENVIRONMENTAL SERVICES, INC.  
GEOLOGIC BORING LOG

Project Address: 319 East Illinois Street, Chicago, Illinois  
Project # 4290-0602, Engineer/Geologist: Samuel T. Bodine  
Weather Condition: Dry X Wet      Snow      Temp 90  
Boring # GP-2 Date: 07/01/02 Time: 1349 Location: See Boring Location Map

DESCRIPTION OF SOILS	DEPTH	SAMPLE	FID-PPM	ODOR
Asphalt FILL (brick, sand, clay gravel)	- -2 - -4 - -6 - -8 - -10 - -12		30       0	None       None
Black staining	-12	GP-2/12'	100	Petroleum odor
Fine brown SAND, moist	-14 - -16		0	None
Total Depth: 16 feet below ground surface (bgs) Rig: Geoprobe Sampler Type: 1.75" Clear plastic sleeves	- -18			

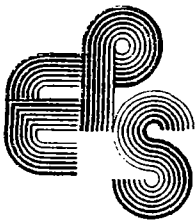




**EPS ENVIRONMENTAL SERVICES, INC.  
GEOLOGIC BORING LOG**

Project Address: 319 East Illinois Street, Chicago, Illinois  
 Project # 4290-0602, Engineer/Geologist: Samuel T. Bodine  
 Weather Condition: Dry X Wet      Snow      Temp 90  
 Boring # GP-3 Date: 07/01/02 Time: 1430 Location: See Boring Location Map

DESCRIPTION OF SOILS	DEPTH	SAMPLE	FID-PPM	ODOR
Asphalt FILL (brick, sand, clay gravel)	-			
	-2			
	-			
	-4		8	None
	-			
	-6			
	-			
	-8	GP-3/8'	20	None
	-			
	-10			
	-			
	-12		0	None
	-			
Fine brown SAND, moist	-14			
	-			
	-16		0	None
	-			
Total Depth: 16 feet below ground surface (bgs)	-			
Rig: Geoprobe	-			
Sampler Type: 1.75" Clear plastic sleeves	-18			



**EPS ENVIRONMENTAL SERVICES, INC.**  
**GEOLOGIC BORING LOG**

Project Address: 319 East Illinois Street, Chicago, Illinois  
Project # 4290-0602, Engineer/Geologist: Samuel T. Bodine  
Weather Condition: Dry X Wet      Snow      Temp 90  
Boring # GP-4 Date: 07/01/02 Time: 1525 Location: See Boring Location Map

DESCRIPTION OF SOILS	DEPTH	SAMPLE	FID-PPM	ODOR
Asphalt FILL (brick, sand, clay gravel)	-			
	-2		100	None
	-			
	-4			
	-			
	-6	GP-4/6'	100	None
	-			
	-8			
Fine brown SAND, moist	-			
	-10		0	None
	-			
	-12			
	-			
	-14		0	None
	-			
	-16			
Total Depth: 16 feet below ground surface (bgs)	-			
Rig: Geoprobe				
Sampler Type: 1.75" Clear plastic sleeves	-18			

Sam Bodine  
EPS Environmental Services  
7237 W. Devon Avenue  
Chicago, IL 60631

July 19, 2002

RE: 319 E Illinois St., Chgo / 4290-0602

Lab Orders:  
02070064

Dear Sam Bodine:

Enclosed are the analytical reports for the EMT Lab Order listed. If you have any questions, please contact me at 847-967-6666 x 1322 or 847-967-9976.

Sincerely,

Approved by,

Arminta Priddy  
Project Manager

Greg Denny  
Operations Manager

The Contents of this report apply to the sample(s) analyzed. No duplication is allowed except in its entirety.

*1 of 15*

State of Illinois Chemical Analysis in Drinking Water Accredited Lab. No. 100256  
State of Wisconsin Wastewater and Hazardous Waste No. 999888890

## **APPENDIX B**

Chain of Custody Record  
Laboratory Analytical Data

**CLIENT:** EPS Environmental Services  
**Project:** 319 E Illinois St., Chgo / 4290-0602  
**Lab Order:** 02070064

**Date:** 19-Jul-02

## **CASE NARRATIVE**

---

Unless otherwise noted, samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition

Unless otherwise noted, all method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.

Sample results relate only to the analytes of interest tested and to the sample received at the laboratory.

All results are reported on a wet weight basis, unless otherwise noted. Dry weight adjusted results are indicated by the notation "dry" in the Units column.

Accreditation by the State of Illinois is not an endorsement or a guarantee of the validity of data generated. For specific information regarding EMT's scope of accreditation, please contact your EMT project manager.

The Reporting Limit listed on the Report of Laboratory Analysis is EMT's reporting limit for the analyte reported. For most test methods this reporting limit is primarily based upon the lowest point in the calibration curve.

### Method References:

SW=USEPA, Test Methods for Evaluating Solid Waste, SW-846.

E=USEPA Methods for the Determination of Inorganic Substances in Environmental Samples; Methods for Chemical Analysis of Water and Wastes; Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, 40 CFR Part 136, App A; methods for the Determination of Metals in Environmental Samples; Methods for the Determination of Organic Compounds in Drinking Water.

SM= APHA, Standard Methods for the Examination of Water and Wastewater.

D=ASTM, Annual Book of Standards

**CLIENT:** EPS Environmental Services

**Date:** 19-Jul-02

**Project:** 319 E Illinois St., Chgo / 4290-0602

## **CASE NARRATIVE**

**Lab Order:** 02070064

---

Analytical Comments for METHOD 8260\_S, E191010: The CCV target analytes outside the 80-120% recovery range are: 1,2-Dibromo-3-Chloropropane, 2-Butanone, Dichlorodifluoromethane, Vinyl Chloride.

Analytical Comments for METHOD 8260\_S, LCS-10304: The LCS target analyte Dichlorodifluoromethane is outside the laboratory limits.

Analytical Comments for METHOD 8310\_S, 02070064-02C: Surrogate recovery is outside of the laboratory acceptance range, due to surrogate co-elution with co-extracted materials.

Analytical Comments for METHOD 8310\_S, 02070064-03C: Surrogate recovery is outside of the laboratory acceptance range due to the matrix effects.

Analytical Comments for METHOD 8310\_S, LCS-10303: LCS recovery for Dibenz(a,h)anthracene is outside of the laboratory control limits.

# Report of Laboratory Analysis

**CLIENT:** EPS Environmental Services  
**Lab Order:** 02070064  
**Project:** 319 E Illinois St., Chgo / 4290-0602  
**Lab ID:** 02070064-01

**Client Sample ID:** GP-1 @ 4'  
**Report Date:** 7/19/02  
**Collection Date:** 7/1/02  
**Matrix:** Soil

Analyses	Result	EMT Reporting Limit	Units	Date Analyzed	Analyst
<b>Corrosivity by pH</b>		<b>Method: SW9045C</b>			
pH	9.76		pH Units	7/3/02 11:53:17 AM	VT
<b>Percent Moisture</b>		<b>Method: 2540G</b>			
Percent Moisture	9.36	0.1	C % (Percent)	7/3/02	RM2
<b>ICP Metals Solids Total</b>		<b>Method: SW6010B</b>			
Barium	212.	0.357	mg/Kg-dry	7/8/02 10:37:28 AM	MLB
Cadmium	< 0.624	0.624	mg/Kg-dry	7/8/02 10:37:28 AM	MLB
Chromium	3.65	1.42	mg/Kg-dry	7/8/02 10:37:28 AM	MLB
Lead	19.9	3.75	mg/Kg-dry	7/8/02 10:37:28 AM	MLB
Silver	< 1.42	1.42	mg/Kg-dry	7/8/02 10:37:28 AM	MLB
<b>Mercury in Solid</b>		<b>Method: SW7471A</b>			
Mercury	0.0993	0.0918	mg/Kg-dry	7/9/02	ES
<b>Metals by GFAA Total</b>		<b>Method: SW7060A</b>			
Arsenic	3.12	0.843	mg/Kg-dry	7/8/02 12:39:56 PM	IG
<b>Metals by GFAA Total</b>		<b>Method: SW7740</b>			
Selenium	1.44	0.502	mg/Kg-dry	7/8/02 3:06:20 PM	IG
<b>Polynuclear Aromatic Hydrocarbons</b>		<b>Method: SW8310</b>			
Acenaphthene	0.355	0.0186	mg/Kg-dry	7/9/02	LBI
Acenaphthylene	< 0.0235	0.0235	mg/Kg-dry	7/9/02	LBI
Anthracene	0.725	0.0204	mg/Kg-dry	7/9/02	LBI
Benz(a)anthracene	1.04	0.0103	mg/Kg-dry	7/9/02	LBI
Benzo(a)pyrene	0.95	0.0212	mg/Kg-dry	7/9/02	LBI
Benzo(b)fluoranthene	0.874	0.0065	mg/Kg-dry	7/9/02	LBI
Benzo(g,h,i)perylene	0.639	0.011	mg/Kg-dry	7/9/02	LBI
Benzo(k)fluoranthene	0.455	0.00601	mg/Kg-dry	7/9/02	LBI
Chrysene	0.975	0.0103	mg/Kg-dry	7/9/02	LBI
Dibenz(a,h)anthracene	0.0997	0.00562	mg/Kg-dry	7/9/02	LBI
Fluoranthene	3.26	0.00732	mg/Kg-dry	7/9/02	LBI
Fluorene	0.637	0.0135	mg/Kg-dry	7/9/02	LBI
Indeno(1,2,3-cd)pyrene	0.479	0.00934	mg/Kg-dry	7/9/02	LBI
Naphthalene	0.646	0.0246	mg/Kg-dry	7/9/02	LBI
Phenanthrene	2.7	0.0188	mg/Kg-dry	7/9/02	LBI
Pyrene	2.72	0.0165	mg/Kg-dry	7/9/02	LBI
<b>Surrogates:</b>					
4-Terphenyl-d14	112	30-140	%REC	7/9/02	LBI
7,12-Dimethylbenz(a)anthracene	49.0	30-130	%REC	7/9/02	LBI

**Qualifiers:** B - Analyte detected in the associated Method Blank  
E - Estimated  
H - Holding Time  
C - Laboratory not accredited for this parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
J - Analyte detected below quantitation limits

# Report of Laboratory Analysis

CLIENT: EPS Environmental Services  
 Lab Order: 02070064  
 Project: 319 E Illinois St., Chgo / 4290-0602  
 Lab ID: 02070064-01

Client Sample ID: GP-1 @ 4'  
 Report Date: 7/19/02  
 Collection Date: 7/1/02  
 Matrix: Soil

Analyses	Result	EMT Reporting Limit	Units	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS		Method: SW8260B			
1,1,1,2-Tetrachloroethane	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
1,1,1-Trichloroethane	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
1,1,2,2-Tetrachloroethane	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
1,1,2-Trichloroethane	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
1,1-Dichloroethane	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
1,1-Dichloroethene	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
1,1-Dichloropropene	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
1,2,3-Trichlorobenzene	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
1,2,3-Trichloropropane	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
1,2,4-Trichlorobenzene	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
1,2,4-Trimethylbenzene	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
1,2-Dibromo-3-chloropropane	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
1,2-Dibromoethane	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
1,2-Dichlorobenzene	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
1,2-Dichloroethane	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
1,2-Dichloropropane	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
1,3,5-Trimethylbenzene	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
1,3-Dichlorobenzene	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
1,3-Dichloropropane	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
1,4-Dichlorobenzene	< 0.00535	0.00535	C mg/Kg-dry	7/9/02 1:48:00 PM	GO
2,2-Dichloropropane	< 0.00535	0.00535	C mg/Kg-dry	7/9/02 1:48:00 PM	GO
2-Butanone	< 0.0535	0.0535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
2-Chlorotoluene	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
2-Hexanone	< 0.0535	0.0535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
4-Chlorotoluene	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
4-Isopropyltoluene	< 0.00535	0.00535	C mg/Kg-dry	7/9/02 1:48:00 PM	GO
4-Methyl-2-pentanone	< 0.0535	0.0535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
Acetone	< 0.128	0.128	mg/Kg-dry	7/9/02 1:48:00 PM	GO
Benzene	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
Bromobenzene	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
Bromochloromethane	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
Bromodichloromethane	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
Bromoform	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
Bromomethane	< 0.0107	0.0107	mg/Kg-dry	7/9/02 1:48:00 PM	GO
Carbon disulfide	0.0758	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
Carbon tetrachloride	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
Chlorobenzene	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO

Qualifiers: B - Analyte detected in the associated Method Blank  
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 C - Laboratory not accredited for this parameter  
 S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 J - Analyte detected below quantitation limits



# Report of Laboratory Analysis

CLIENT: EPS Environmental Services  
 Lab Order: 02070064  
 Project: 319 E Illinois St., Chgo / 4290-0602  
 Lab ID: 02070064-01

Client Sample ID: GP-1 @ 4'  
 Report Date: 7/19/02  
 Collection Date: 7/1/02  
 Matrix: Soil

Analyses	Result	EMT Reporting Limit	Units	Date Analyzed	Analyst
Chloroethane	< 0.0107	0.0107	mg/Kg-dry	7/9/02 1:48:00 PM	GO
Chloroform	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
Chloromethane	< 0.0107	0.0107	mg/Kg-dry	7/9/02 1:48:00 PM	GO
cis-1,2-Dichloroethene	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
cis-1,3-Dichloropropene	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
Dibromochloromethane	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
Dibromomethane	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
Dichlorodifluoromethane	< 0.0107	0.0107	mg/Kg-dry	7/9/02 1:48:00 PM	GO
Ethylbenzene	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
Hexachlorobutadiene	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
Isopropylbenzene	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
m,p-Xylene	< 0.0107	0.0107	mg/Kg-dry	7/9/02 1:48:00 PM	GO
Methylene chloride	< 0.0107	0.0107	mg/Kg-dry	7/9/02 1:48:00 PM	GO
n-Butylbenzene	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
n-Propylbenzene	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
Naphthalene	0.0141	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
o-Xylene	< 0.00535	0.00535	C mg/Kg-dry	7/9/02 1:48:00 PM	GO
sec-Butylbenzene	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
Styrene	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
tert-Butylbenzene	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
Tetrachloroethene	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
Toluene	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
trans-1,2-Dichloroethene	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
trans-1,3-Dichloropropene	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
Trichloroethene	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
Trichlorofluoromethane	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
Vinyl chloride	< 0.00535	0.00535	mg/Kg-dry	7/9/02 1:48:00 PM	GO
Surrogates:					
1,2-Dichloroethane-d4	106	66-126	%REC	7/9/02 1:48:00 PM	GO
4-Bromofluorobenzene	98.5	60-122	%REC	7/9/02 1:48:00 PM	GO
d4-1,2-Dichlorobenzene	88.2	66-121	%REC	7/9/02 1:48:00 PM	GO
Dibromofluoromethane	116	65-124	%REC	7/9/02 1:48:00 PM	GO
Fluorobenzene	93.4	65-134	%REC	7/9/02 1:48:00 PM	GO
Toluene-d8	94.2	65-131	%REC	7/9/02 1:48:00 PM	GO

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S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 J - Analyte detected below quantitation limits

# Report of Laboratory Analysis

**CLIENT:** EPS Environmental Services  
**Lab Order:** 02070064  
**Project:** 319 E Illinois St., Chgo / 4290-0602  
**Lab ID:** 02070064-02

**Client Sample ID:** GP-2 @ 12'  
**Report Date:** 7/19/02  
**Collection Date:** 7/1/02  
**Matrix:** Soil

Analyses	Result	EMT Reporting Limit	Units	Date Analyzed	Analyst
<b>Corrosivity by pH</b>		<b>Method: SW9045C</b>			
pH	7.7		pH Units	7/3/02 11:53:17 AM	VT
<b>Percent Moisture</b>		<b>Method: 2540G</b>			
Percent Moisture	23.2	0.1	C % (Percent)	7/3/02	RM2
<b>ICP Metals Solids Total</b>		<b>Method: SW6010B</b>			
Barium	568.	0.429	mg/Kg-dry	7/8/02 10:37:28 AM	MLB
Cadmium	2.71	0.752	mg/Kg-dry	7/8/02 10:37:28 AM	MLB
Chromium	12.8	1.71	mg/Kg-dry	7/8/02 10:37:28 AM	MLB
Lead	809.	9.02	mg/Kg-dry	7/8/02 1:34:27 PM	MLB
Silver	14.7	1.71	mg/Kg-dry	7/8/02 10:37:28 AM	MLB
<b>Mercury in Solid</b>		<b>Method: SW7471A</b>			
Mercury	1.04	0.108	mg/Kg-dry	7/9/02	ES
<b>Metals by GFAA Total</b>		<b>Method: SW7060A</b>			
Arsenic	11.5	0.394	mg/Kg-dry	7/8/02 12:39:56 PM	IG
<b>Metals by GFAA Total</b>		<b>Method: SW7740</b>			
Selenium	0.776	0.587	mg/Kg-dry	7/8/02 3:06:20 PM	IG
<b>Metals by GFAA, TCLP Extraction</b>		<b>Method: SW7421</b>			
Lead	8.57	0.16	mg/L	7/18/02 9:20:49 AM	IG
<b>Polynuclear Aromatic Hydrocarbons</b>		<b>Method: SW8310</b>			
Acenaphthene	14.8	0.835	mg/Kg-dry	7/9/02	LBI
Acenaphthylene	0.521	0.0275	mg/Kg-dry	7/9/02	LBI
Acenaphthylene	< 1.06	1.06	mg/Kg-dry	7/9/02	LBI
Anthracene	23.1	0.918	mg/Kg-dry	7/9/02	LBI
Benz(a)anthracene	30.5	0.462	mg/Kg-dry	7/9/02	LBI
Benzo(a)pyrene	17.4	0.955	mg/Kg-dry	7/9/02	LBI
Benzo(b)fluoranthene	19.5	0.292	mg/Kg-dry	7/9/02	LBI
Benzo(g,h,i)perylene	8.35	0.496	mg/Kg-dry	7/9/02	LBI
Benzo(k)fluoranthene	9.64	0.27	mg/Kg-dry	7/9/02	LBI
Chrysene	26.3	0.464	mg/Kg-dry	7/9/02	LBI
Dibenz(a,h)anthracene	1.78	0.253	mg/Kg-dry	7/9/02	LBI
Fluoranthene	115	0.329	mg/Kg-dry	7/9/02	LBI
Fluorene	18.5	0.609	mg/Kg-dry	7/9/02	LBI
Indeno(1,2,3-cd)pyrene	6.38	0.42	mg/Kg-dry	7/9/02	LBI
Naphthalene	3.38	1.11	mg/Kg-dry	7/9/02	LBI
Phenanthrene	59	0.847	mg/Kg-dry	7/9/02	LBI
Pyrene	95.7	0.744	mg/Kg-dry	7/9/02	LBI
<b>Surrogates:</b>					
4-Terphenyl-d14	1,100	30-140	S %REC	7/9/02	LBI
7,12-Dimethylbenz(a)anthracene	405	30-130	S %REC	7/9/02	LBI

**Qualifiers:** B - Analyte detected in the associated Method Blank  
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J - Analyte detected below quantitation limits

## Report of Laboratory Analysis

**CLIENT:** EPS Environmental Services  
**Lab Order:** 02070064  
**Project:** 319 E Illinois St., Chgo / 4290-0602  
**Lab ID:** 02070064-02

**Client Sample ID:** GP-2 @ 12'  
**Report Date:** 7/19/02  
**Collection Date:** 7/1/02  
**Matrix:** Soil

Analyses	Result	EMT Reporting Limit	Units	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS</b>		<b>Method: SW8260B</b>			
1,1,1,2-Tetrachloroethane	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
1,1,1-Trichloroethane	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
1,1,2,2-Tetrachloroethane	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
1,1,2-Trichloroethane	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
1,1-Dichloroethane	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
1,1-Dichloroethene	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
1,1-Dichloropropene	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
1,2,3-Trichlorobenzene	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
1,2,3-Trichloropropane	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
1,2,4-Trichlorobenzene	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
1,2,4-Trimethylbenzene	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
1,2-Dibromo-3-chloropropane	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
1,2-Dibromoethane	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
1,2-Dichlorobenzene	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
1,2-Dichloroethane	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
1,2-Dichloropropane	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
1,3,5-Trimethylbenzene	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
1,3-Dichlorobenzene	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
1,3-Dichloropropane	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
1,4-Dichlorobenzene	< 0.00574	0.00574	C mg/Kg-dry	7/9/02 2:25:00 PM	GO
2,2-Dichloropropane	< 0.00574	0.00574	C mg/Kg-dry	7/9/02 2:25:00 PM	GO
2-Butanone	< 0.0574	0.0574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
2-Chlorotoluene	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
2-Hexanone	< 0.0574	0.0574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
4-Chlorotoluene	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
4-Isopropyltoluene	< 0.00574	0.00574	C mg/Kg-dry	7/9/02 2:25:00 PM	GO
4-Methyl-2-pentanone	< 0.0574	0.0574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
Acetone	0.287	0.138	mg/Kg-dry	7/9/02 2:25:00 PM	GO
Benzene	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
Bromobenzene	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
Bromochloromethane	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
Bromodichloromethane	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
Bromoform	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
Bromomethane	< 0.0115	0.0115	mg/Kg-dry	7/9/02 2:25:00 PM	GO
Carbon disulfide	0.0337	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
Carbon tetrachloride	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
Chlorobenzene	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO

**Qualifiers:** B - Analyte detected in the associated Method Blank  
 E - Estimated  
 H - Holding Time  
 C - Laboratory not accredited for this parameter

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 J - Analyte detected below quantitation limits

## Report of Laboratory Analysis

**CLIENT:** EPS Environmental Services  
**Lab Order:** 02070064  
**Project:** 319 E Illinois St., Chgo / 4290-0602  
**Lab ID:** 02070064-02

**Client Sample ID:** GP-2 @ 12'  
**Report Date:** 7/19/02  
**Collection Date:** 7/1/02  
**Matrix:** Soil

Analyses	Result	EMT Reporting Limit	Units	Date Analyzed	Analyst
Chloroethane	< 0.0115	0.0115	mg/Kg-dry	7/9/02 2:25:00 PM	GO
Chloroform	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
Chloromethane	< 0.0115	0.0115	mg/Kg-dry	7/9/02 2:25:00 PM	GO
cis-1,2-Dichloroethene	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
cis-1,3-Dichloropropene	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
Dibromochloromethane	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
Dibromomethane	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
Dichlorodifluoromethane	< 0.0115	0.0115	mg/Kg-dry	7/9/02 2:25:00 PM	GO
Ethylbenzene	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
Hexachlorobutadiene	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
Isopropylbenzene	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
m,p-Xylene	< 0.0115	0.0115	mg/Kg-dry	7/9/02 2:25:00 PM	GO
Methylene chloride	< 0.0115	0.0115	mg/Kg-dry	7/9/02 2:25:00 PM	GO
n-Butylbenzene	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
n-Propylbenzene	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
Naphthalene	0.0881	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
o-Xylene	< 0.00574	0.00574	C mg/Kg-dry	7/9/02 2:25:00 PM	GO
sec-Butylbenzene	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
Styrene	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
tert-Butylbenzene	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
Tetrachloroethene	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
Toluene	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
trans-1,2-Dichloroethene	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
trans-1,3-Dichloropropene	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
Trichloroethene	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
Trichlorofluoromethane	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
Vinyl chloride	< 0.00574	0.00574	mg/Kg-dry	7/9/02 2:25:00 PM	GO
Surrogates:					
1,2-Dichloroethane-d4	103	66-126	%REC	7/9/02 2:25:00 PM	GO
4-Bromofluorobenzene	119	60-122	%REC	7/9/02 2:25:00 PM	GO
d4-1,2-Dichlorobenzene	93.0	66-121	%REC	7/9/02 2:25:00 PM	GO
Dibromofluoromethane	99.4	65-124	%REC	7/9/02 2:25:00 PM	GO
Fluorobenzene	97.5	65-134	%REC	7/9/02 2:25:00 PM	GO
Toluene-d8	106	65-131	%REC	7/9/02 2:25:00 PM	GO

**Qualifiers:** B - Analyte detected in the associated Method Blank  
 E - Estimated  
 H - Holding Time  
 C - Laboratory not accredited for this parameter

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 J - Analyte detected below quantitation limits

## Report of Laboratory Analysis

**CLIENT:** EPS Environmental Services  
**Lab Order:** 02070064  
**Project:** 319 E Illinois St., Chgo / 4290-0602  
**Lab ID:** 02070064-03

**Client Sample ID:** GP-3 @ 8'  
**Report Date:** 7/19/02  
**Collection Date:** 7/1/02  
**Matrix:** Soil

Analyses	Result	EMT Reporting Limit	Units	Date Analyzed	Analyst
<b>Corrosivity by pH</b>		<b>Method: SW9045C</b>			
pH	8.25		pH Units	7/3/02 11:53:17 AM	VT
<b>Percent Moisture</b>		<b>Method: 2540G</b>			
Percent Moisture	17.6	0.1	C % (Percent)	7/3/02	RM2
<b>ICP Metals Solids Total</b>		<b>Method: SW6010B</b>			
Barium	52.6	0.392	mg/Kg-dry	7/8/02 10:37:28 AM	MLB
Cadmium	< 0.687	0.687	mg/Kg-dry	7/8/02 10:37:28 AM	MLB
Chromium	3.66	1.57	mg/Kg-dry	7/8/02 10:37:28 AM	MLB
Lead	123.	4.12	mg/Kg-dry	7/8/02 10:37:28 AM	MLB
Silver	< 1.57	1.57	mg/Kg-dry	7/8/02 10:37:28 AM	MLB
<b>Mercury in Solid</b>		<b>Method: SW7471A</b>			
Mercury	0.617	0.107	mg/Kg-dry	7/9/02	ES
<b>Metals by GFAA Total</b>		<b>Method: SW7060A</b>			
Arsenic	12.1	0.928	mg/Kg-dry	7/8/02 12:39:56 PM	IG
<b>Metals by GFAA Total</b>		<b>Method: SW7740</b>			
Selenium	0.941	0.552	mg/Kg-dry	7/8/02 3:06:20 PM	IG
<b>Polynuclear Aromatic Hydrocarbons</b>		<b>Method: SW8310</b>			
Acenaphthene	0.195	0.0204	mg/Kg-dry	7/9/02	LBI
Acenaphthylene	< 0.0258	0.0258	mg/Kg-dry	7/9/02	LBI
Anthracene	0.827	0.0224	mg/Kg-dry	7/9/02	LBI
Benz(a)anthracene	2.28	0.0113	mg/Kg-dry	7/9/02	LBI
Benzo(a)pyrene	2.07	0.0233	mg/Kg-dry	7/9/02	LBI
Benzo(b)fluoranthene	2.4	0.00713	mg/Kg-dry	7/9/02	LBI
Benzo(g,h,i)perylene	1.47	0.0121	mg/Kg-dry	7/9/02	LBI
Benzo(k)fluoranthene	1.21	0.00659	mg/Kg-dry	7/9/02	LBI
Chrysene	2.4	0.0113	mg/Kg-dry	7/9/02	LBI
Dibenz(a,h)anthracene	0.327	0.00617	mg/Kg-dry	7/9/02	LBI
Fluoranthene	5.33	0.00803	mg/Kg-dry	7/9/02	LBI
Fluorene	0.265	0.0149	mg/Kg-dry	7/9/02	LBI
Indeno(1,2,3-cd)pyrene	1.08	0.0102	mg/Kg-dry	7/9/02	LBI
Naphthalene	0.16	0.027	mg/Kg-dry	7/9/02	LBI
Phenanthrene	3.12	0.0207	mg/Kg-dry	7/9/02	LBI
Pyrene	4.7	0.0182	mg/Kg-dry	7/9/02	LBI
<b>Surrogates:</b>					
4-Terphenyl-d14	101	30-140	%REC	7/9/02	LBI
7,12-Dimethylbenz(a)anthracene	26.2	30-130	S %REC	7/9/02	LBI

**Qualifiers:** B - Analyte detected in the associated Method Blank  
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S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 J - Analyte detected below quantitation limits

# Report of Laboratory Analysis

**CLIENT:** EPS Environmental Services  
**Lab Order:** 02070064  
**Project:** 319 E Illinois St., Chgo / 4290-0602  
**Lab ID:** 02070064-03

**Client Sample ID:** GP-3 @ 8'  
**Report Date:** 7/19/02  
**Collection Date:** 7/1/02  
**Matrix:** Soil

Analyses	Result	EMT Reporting Limit	Units	Date Analyzed	Analyst
<b>Volatile Organic Compounds by GC/MS</b>		<b>Method: SW8260B</b>			
1,1,1,2-Tetrachloroethane	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
1,1,1-Trichloroethane	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
1,1,2,2-Tetrachloroethane	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
1,1,2-Trichloroethane	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
1,1-Dichloroethane	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
1,1-Dichloroethene	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
1,1-Dichloropropene	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
1,2,3-Trichlorobenzene	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
1,2,3-Trichloropropane	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
1,2,4-Trichlorobenzene	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
1,2,4-Trimethylbenzene	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
1,2-Dibromo-3-chloropropane	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
1,2-Dibromoethane	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
1,2-Dichlorobenzene	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
1,2-Dichloroethane	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
1,2-Dichloropropane	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
1,3,5-Trimethylbenzene	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
1,3-Dichlorobenzene	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
1,3-Dichloropropane	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
1,4-Dichlorobenzene	< 0.00544	0.00544	C mg/Kg-dry	7/9/02 3:01:00 PM	GO
2,2-Dichloropropane	< 0.00544	0.00544	C mg/Kg-dry	7/9/02 3:01:00 PM	GO
2-Butanone	< 0.0544	0.0544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
2-Chlorotoluene	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
2-Hexanone	< 0.0544	0.0544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
4-Chlorotoluene	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
4-Isopropyltoluene	< 0.00544	0.00544	C mg/Kg-dry	7/9/02 3:01:00 PM	GO
4-Methyl-2-pentanone	< 0.0544	0.0544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
Acetone	< 0.131	0.131	mg/Kg-dry	7/9/02 3:01:00 PM	GO
Benzene	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
Bromobenzene	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
Bromochloromethane	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
Bromodichloromethane	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
Bromoform	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
Bromomethane	< 0.0109	0.0109	mg/Kg-dry	7/9/02 3:01:00 PM	GO
Carbon disulfide	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
Carbon tetrachloride	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
Chlorobenzene	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO

**Qualifiers:** B - Analyte detected in the associated Method Blank  
E - Estimated  
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C - Laboratory not accredited for this parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
J - Analyte detected below quantitation limits

# Report of Laboratory Analysis

**CLIENT:** EPS Environmental Services  
**Lab Order:** 02070064  
**Project:** 319 E Illinois St., Chgo / 4290-0602  
**Lab ID:** 02070064-03

**Client Sample ID:** GP-3 @ 8'  
**Report Date:** 7/19/02  
**Collection Date:** 7/1/02  
**Matrix:** Soil

Analyses	Result	EMT Reporting Limit	Units	Date Analyzed	Analyst
Chloroethane	< 0.0109	0.0109	mg/Kg-dry	7/9/02 3:01:00 PM	GO
Chloroform	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
Chloromethane	< 0.0109	0.0109	mg/Kg-dry	7/9/02 3:01:00 PM	GO
cis-1,2-Dichloroethene	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
cis-1,3-Dichloropropene	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
Dibromochloromethane	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
Dibromomethane	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
Dichlorodifluoromethane	< 0.0109	0.0109	mg/Kg-dry	7/9/02 3:01:00 PM	GO
Ethylbenzene	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
Hexachlorobutadiene	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
Isopropylbenzene	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
m,p-Xylene	< 0.0109	0.0109	mg/Kg-dry	7/9/02 3:01:00 PM	GO
Methylene chloride	< 0.0109	0.0109	mg/Kg-dry	7/9/02 3:01:00 PM	GO
n-Butylbenzene	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
n-Propylbenzene	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
Naphthalene	0.0073	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
o-Xylene	< 0.00544	0.00544	C mg/Kg-dry	7/9/02 3:01:00 PM	GO
sec-Butylbenzene	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
Styrene	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
tert-Butylbenzene	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
Tetrachloroethene	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
Toluene	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
trans-1,2-Dichloroethene	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
trans-1,3-Dichloropropene	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
Trichloroethene	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
Trichlorofluoromethane	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
Vinyl chloride	< 0.00544	0.00544	mg/Kg-dry	7/9/02 3:01:00 PM	GO
Surrogates:					
1,2-Dichloroethane-d4	101	66-126	%REC	7/9/02 3:01:00 PM	GO
4-Bromofluorobenzene	96.7	60-122	%REC	7/9/02 3:01:00 PM	GO
d4-1,2-Dichlorobenzene	84.5	66-121	%REC	7/9/02 3:01:00 PM	GO
Dibromofluoromethane	96.9	65-124	%REC	7/9/02 3:01:00 PM	GO
Fluorobenzene	96.1	65-134	%REC	7/9/02 3:01:00 PM	GO
Toluene-d8	106	65-131	%REC	7/9/02 3:01:00 PM	GO

**Qualifiers:** B - Analyte detected in the associated Method Blank  
E - Estimated  
H - Holding Time  
C - Laboratory not accredited for this parameter

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
J - Analyte detected below quantitation limits

## Report of Laboratory Analysis

**CLIENT:** EPS Environmental Services  
**Lab Order:** 02070064  
**Project:** 319 E Illinois St., Chgo / 4290-0602  
**Lab ID:** 02070064-04

**Client Sample ID:** GP-4 @ 6'  
**Report Date:** 7/19/02  
**Collection Date:** 7/1/02  
**Matrix:** Soil

Analyses	Result	EMT Reporting Limit	Units	Date Analyzed	Analyst
<b>Corrosivity by pH</b>		<b>Method:</b> SW9045C			
pH	8.13		pH Units	7/3/02 11:53:17 AM	VT
<b>Percent Moisture</b>		<b>Method:</b> 2540G			
Percent Moisture	5.77	0.1	C % (Percent)	7/3/02	RM2
<b>ICP Metals Solids Total</b>		<b>Method:</b> SW6010B			
Barium	14.1	0.35	mg/Kg-dry	7/8/02 10:37:28 AM	MLB
Cadmium	< 0.613	0.613	mg/Kg-dry	7/8/02 10:37:28 AM	MLB
Chromium	3.43	1.4	mg/Kg-dry	7/8/02 10:37:28 AM	MLB
Lead	30.7	3.68	mg/Kg-dry	7/8/02 10:37:28 AM	MLB
Silver	< 1.4	1.4	mg/Kg-dry	7/8/02 10:37:28 AM	MLB
<b>Mercury in Solid</b>		<b>Method:</b> SW7471A			
Mercury	0.146	0.0723	mg/Kg-dry	7/9/02	ES
<b>Metals by GFAA Total</b>		<b>Method:</b> SW7060A			
Arsenic	2.59	0.309	mg/Kg-dry	7/8/02 12:39:56 PM	IG
<b>Metals by GFAA Total</b>		<b>Method:</b> SW7740			
Selenium	< 0.46	0.46	mg/Kg-dry	7/8/02 3:06:20 PM	IG
<b>Polynuclear Aromatic Hydrocarbons</b>		<b>Method:</b> SW8310			
Acenaphthene	0.0612	0.0177	mg/Kg-dry	7/9/02	LBI
Acenaphthylene	< 0.0224	0.0224	mg/Kg-dry	7/9/02	LBI
Anthracene	0.155	0.0195	mg/Kg-dry	7/9/02	LBI
Benz(a)anthracene	0.38	0.00979	mg/Kg-dry	7/9/02	LBI
Benzo(a)pyrene	0.427	0.0203	mg/Kg-dry	7/9/02	LBI
Benzo(b)fluoranthene	0.346	0.0062	mg/Kg-dry	7/9/02	LBI
Benzo(g,h,i)perylene	0.246	0.0105	mg/Kg-dry	7/9/02	LBI
Benzo(k)fluoranthene	0.199	0.00573	mg/Kg-dry	7/9/02	LBI
Chrysene	0.372	0.00984	mg/Kg-dry	7/9/02	LBI
Dibenz(a,h)anthracene	0.0377	0.00536	mg/Kg-dry	7/9/02	LBI
Fluoranthene	0.858	0.00698	mg/Kg-dry	7/9/02	LBI
Fluorene	0.0872	0.0129	mg/Kg-dry	7/9/02	LBI
Indeno(1,2,3-cd)pyrene	0.161	0.0089	mg/Kg-dry	7/9/02	LBI
Naphthalene	0.0716	0.0235	mg/Kg-dry	7/9/02	LBI
Phenanthrene	0.639	0.018	mg/Kg-dry	7/9/02	LBI
Pyrene	0.816	0.0158	mg/Kg-dry	7/9/02	LBI
<b>Surrogates:</b>					
4-Terphenyl-d14	90.7	30-140	%REC	7/9/02	LBI
7,12-Dimethylbenz(a)anthracene	71.5	30-130	%REC	7/9/02	LBI

**Qualifiers:** B - Analyte detected in the associated Method Blank  
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 R - RPD outside accepted recovery limits  
 J - Analyte detected below quantitation limits



# Report of Laboratory Analysis

CLIENT: EPS Environmental Services  
 Lab Order: 02070064  
 Project: 319 E Illinois St., Chgo / 4290-0602  
 Lab ID: 02070064-04

Client Sample ID: GP-4 @ 6'  
 Report Date: 7/19/02  
 Collection Date: 7/1/02  
 Matrix: Soil

Analyses	Result	EMT Reporting Limit	Units	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS		Method: SW8260B			
1,1,1,2-Tetrachloroethane	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
1,1,1-Trichloroethane	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
1,1,2,2-Tetrachloroethane	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
1,1,2-Trichloroethane	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
1,1-Dichloroethane	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
1,1-Dichloroethene	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
1,1-Dichloropropene	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
1,2,3-Trichlorobenzene	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
1,2,3-Trichloropropane	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
1,2,4-Trichlorobenzene	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
1,2,4-Trimethylbenzene	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
1,2-Dibromo-3-chloropropane	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
1,2-Dibromoethane	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
1,2-Dichlorobenzene	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
1,2-Dichloroethane	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
1,2-Dichloropropane	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
1,3,5-Trimethylbenzene	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
1,3-Dichlorobenzene	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
1,3-Dichloropropane	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
1,4-Dichlorobenzene	< 0.00463	0.00463	C mg/Kg-dry	7/9/02 3:38:00 PM	GO
2,2-Dichloropropane	< 0.00463	0.00463	C mg/Kg-dry	7/9/02 3:38:00 PM	GO
2-Butanone	< 0.0463	0.0463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
2-Chlorotoluene	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
2-Hexanone	< 0.0463	0.0463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
4-Chlorotoluene	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
4-Isopropyltoluene	< 0.00463	0.00463	C mg/Kg-dry	7/9/02 3:38:00 PM	GO
4-Methyl-2-pentanone	< 0.0463	0.0463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
Acetone	0.165	0.111	mg/Kg-dry	7/9/02 3:38:00 PM	GO
Benzene	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
Bromobenzene	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
Bromochloromethane	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
Bromodichloromethane	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
Bromoform	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
Bromomethane	< 0.00926	0.00926	mg/Kg-dry	7/9/02 3:38:00 PM	GO
Carbon disulfide	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
Carbon tetrachloride	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
Chlorobenzene	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO

Qualifiers: B - Analyte detected in the associated Method Blank  
 E - Estimated  
 H - Holding Time  
 C - Laboratory not accredited for this parameter

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 J - Analyte detected below quantitation limits

## Report of Laboratory Analysis

**CLIENT:** EPS Environmental Services  
**Lab Order:** 02070064  
**Project:** 319 E Illinois St., Chgo / 4290-0602  
**Lab ID:** 02070064-04

**Client Sample ID:** GP-4 @ 6'  
**Report Date:** 7/19/02  
**Collection Date:** 7/1/02  
**Matrix:** Soil

Analyses	Result	EMT	Units	Date Analyzed	Analyst
		Reporting Limit			
Chloroethane	< 0.00926	0.00926	mg/Kg-dry	7/9/02 3:38:00 PM	GO
Chloroform	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
Chloromethane	< 0.00926	0.00926	mg/Kg-dry	7/9/02 3:38:00 PM	GO
cis-1,2-Dichloroethene	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
cis-1,3-Dichloropropene	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
Dibromochloromethane	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
Dibromomethane	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
Dichlorodifluoromethane	< 0.00926	0.00926	mg/Kg-dry	7/9/02 3:38:00 PM	GO
Ethylbenzene	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
Hexachlorobutadiene	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
Isopropylbenzene	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
m,p-Xylene	< 0.00926	0.00926	mg/Kg-dry	7/9/02 3:38:00 PM	GO
Methylene chloride	< 0.00926	0.00926	mg/Kg-dry	7/9/02 3:38:00 PM	GO
n-Butylbenzene	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
n-Propylbenzene	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
Naphthalene	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
o-Xylene	< 0.00463	0.00463	C mg/Kg-dry	7/9/02 3:38:00 PM	GO
sec-Butylbenzene	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
Styrene	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
tert-Butylbenzene	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
Tetrachloroethene	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
Toluene	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
trans-1,2-Dichloroethene	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
trans-1,3-Dichloropropene	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
Trichloroethene	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
Trichlorofluoromethane	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
Vinyl chloride	< 0.00463	0.00463	mg/Kg-dry	7/9/02 3:38:00 PM	GO
Surrogates:					
1,2-Dichloroethane-d4	104	66-126	%REC	7/9/02 3:38:00 PM	GO
4-Bromofluorobenzene	116	60-122	%REC	7/9/02 3:38:00 PM	GO
d4-1,2-Dichlorobenzene	93.0	66-121	%REC	7/9/02 3:38:00 PM	GO
Dibromofluoromethane	92.8	65-124	%REC	7/9/02 3:38:00 PM	GO
Fluorobenzene	92.0	65-134	%REC	7/9/02 3:38:00 PM	GO
Toluene-d8	90.2	65-131	%REC	7/9/02 3:38:00 PM	GO

**Qualifiers:** B - Analyte detected in the associated Method Blank  
 E - Estimated  
 H - Holding Time  
 C - Laboratory not accredited for this parameter

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 J - Analyte detected below quantitation limits



## Chain of Custody Record

 ROUTLEDGE

Due Date: - - - - - COC #: 112076

**Preservative:**

1. None	4. NaOH	7. Zn Ace
2. H <sub>2</sub> SO <sub>4</sub>	5. HCl	8. Other
3. HNO <sub>3</sub>	6. MeOH	

## Analyses

EMT  
USE  
ONLY

EMT  
WORKORDER

Relinquished By:	Date: - - Time: :	Received By:	Date: - - Time: :	EMT USE ONLY	<input type="checkbox"/> SAMPLE RECEIVED ON ICE <input type="checkbox"/> TEMPERATURE (Must be recorded if sampling was greater than 6 hrs. prior to sample receipt)
				Client Code:	
Relinquished By:	Date: - - Time: :	Received By:	Date: - - Time: :	EMT Project I.D.	
Relinquished By:	Date: - - Time: :	Received For Lab By:	Date: - - Time: :	Jar Lot No.	<b>EMT SAMPLE RETURN POLICY ON BACK</b>

**SPECIAL INSTRUCTIONS:**

## **APPENDIX C**

### **Comparison Table**

TABLE ONE

VOCs/PNAs Soil Comparison Chart 315 East Illinois Street Chicago, Illinois Residential EPS Project #: 4290-0602	Values for Soil		Migration to Groundwater Ingestion Exposure Route Value					
	Residential		Class I (mg/kg)	Class II (mg/kg)				
	Ingestion (mg/kg)	Inhalation (mg/kg)			Sample Results, mg/kg			
Sample ID					GP-1/4'	GP-2/12'	GP-3/8'	GP-4/6'
Sample Date					7/1/02	7/1/02	7/1/02	7/1/02
Constituent								
Acetone	7800	100000	16	16	<0.128	0.287	<0.131	0.165
Carbon disulfide	7800	720	32	160	0.0758	0.0337	<0.00544	<0.00463
Acenaphthene	4700	----	570	2900	0.355	14.8	0.195	0.0612
Acenaphthylene	----	----	----	----	<0.0235	<1.06	<0.0258	<0.0224
Anthracene	23000	----	12000	59000	0.725	23.1	0.827	0.155
Benzo (a) anthracene	0.9	----	2	8	1.04	30.5	2.28	0.38
Benzo (a) pyrene	0.09	----	8	82	0.95	17.4	2.07	0.427
Benzo (b) fluoranthene	0.9	----	5	25	0.874	19.5	2.4	0.346
Benzo (g,h,i) perylene	----	----	----	----	0.639	8	1.47	0.246
Benzo (k) fluoranthene	9	----	49	250	0.455	8.35	1.21	0.199
Chrysene	88	----	160	800	0.975	26.3	2.4	0.372
Fluoranthene	3100	---	4300	21000	0.0997	115	5.33	0.858
Fluorene	3100	---	560	2800	0.637	18.5	0.265	0.0872
Indeno(1,2,3-cd) pyrene	0.9	---	14	69	0.479	6.38	1.08	0.161
Napthalene	1600	170	12	1.8	0.646	3.38	0.16	0.0716
Phenanthrene	----	----	----	----	2.72	95.7	3.12	0.639
Pyrene	2300	----	4200	21000	NA	NA	2.96	0.816

**Bold** = concentrations above ingestion and/or groundwater SROs

***Bold/Italics*** = concentrations above construction worker safety

all concentrations expressed in parts per million

---- = No toxicity criteria available for this route of exposure

TABLE TWO

RCRA Metals in Soil 319 East Illinois Street Chicago, IL Residential Land Use EPS Project #: 4290-0602			Migration to Groundwater Ingestion Exposure Route Value pH Specific for Class I Groundwater				Background Values					
	Residential											
	Ingestion (mg/kg)	Inhalation (mg/kg)	7.25-7.74	7.75-8.24	8.25-8.74	8.75-9.0	counties within metropolitan statistical areas		Sample Results, mg/kg			
Sample ID									GP-1/4'	GP-2/12'	GP-3/8'	GP-4/6'
Sample Date									7/1/02	7/1/02	7/1/02	7/1/02
Constituent												
Arsenic	13	750	30	31	32	33	13	3.12	11.5	12.1	2.59	
Barium	5,500	690,000	1800	1800	----	----	110	212	568	52.6	14.1	
Cadmium	78	1,800	59	430	----	----	0.6	<0.624	2.71	<0.687	<0.613	
Chromium	230	270	32	28	24	21	16.2	3.65	12.8	3.66	3.43	
Lead	400	----	----	----	----	----	36	19.9	<b>809/8.57*</b>	123	30.7	
Mercury	23	10	6.4	8	----	----	0.06	0.0993	1.04	0.617	0.146	
Selenium	390	----	3.3	2.4	1.8	1.3	0.48	1	<0.277	0.195	0.238	
Silver	390	----	39	110	----	----	0.55	1.44	0.776	0.941	<0.46	
pH	----	----	----	----	----	----	----	9.76	7.7	8.25	8.13	

**Notes:**

all concentrations expressed in parts per million

---- = No toxicity criteria available for this route of exposure

\* = TCLP analysis

**Bold** = above Tier 1 SROs & Hazardous as defined by RCRA